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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,967	04/15/2004	Glenn A. Baxter	X-1641-I US	7455

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XILINX, INC
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EXAMINER

SHIN, CHRISTOPHER B

ART UNIT	PAPER NUMBER
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2181

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/824,967

Applicant(s)

BAXTER ET AL

Examiner

Christopher B. Shin

Art Unit

2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 26-31 is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-17 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 5-9, 18-22 and 26-31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4-15 & 8-11 of 2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 17 & 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Lim (5,765,036).

a. In figures 1-2, 6, 12, and the respective descriptive sections teaches the equivalent claimed limitations as follows:

Claim 1 Lim

- Apparatus for controlling access to memory circuitry among a plurality of bus interfaces of a data processing system
 - Figure 1 system
- A plurality of ports respectively coupled to said plurality of bus interfaces
 - (42, 100)
- Arbitration logic, in communication with said plurality of ports, for arbitrating access to said memory circuitry among said plurality of bus interfaces on a time-shared basis
 - (Column 14, lines 14-17)

Claim 2 Lim

- a data bus and an address bus, each of said data bus and said address bus coupled to said plurality of ports
 - (buses 98 & 114, 118, 130 having data and address buses coupled to 96, 100, 120)
- data path logic configured to communicate signals between said data bus and said memory circuitry
 - (52, 60, 64)
- address path logic configured to communicate signals between said address bus and said memory circuitry
 - (54, 58, 66)

Claim 3 Lim

- a control bus coupled to said plurality of ports and said arbitration logic
 - (56, 98, 130 coupled to 42, 100, 78)
- control logic coupled to said arbitration logic and configured to couple signals to said memory circuitry
 - (96, 124 coupled to 78 and couple signals to 50)

Claim 4 Lim

- wherein each of said arbitration logic and said control logic is coupled to each of said data path logic and said address path logic
 - (78 and 96, 100 coupled to 52, 54, 58, 60, 64, 66)

b. As for claims 1-4, since the Lim reference teaches the all of the equivalent claimed limitations, the claimed invention is anticipated by the teachings of the Lim reference.

c. As for claims 17 & 23 the detailed teachings of the above claims are similarly applied.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-16 & 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim (5,765,036).

d. The teachings of the parent claims 1 and 17 are applied hereafter.

e. As for dependent claims 10-16 & 24-25 further add limitations regarding different types of memory control types (BRAM, DDR, SDRAM, DMA controller)

and bus interface types. However, such different types are well-known types of memory control types and bus interface types in the art of memory accessing/controlling system. Therefore, it would have been obvious at the time the invention was made to one skilled in the art to easily add or substitute the above mentioned types to Lim device to come up with the claimed invention for the best suited memory accessing criteria and for the best suited bus interface type according to many different possible design criteria. This is because many different types of memory and memory accessing technique are commonly utilized/practiced and known in the art and skilled in the art can easily choose a specific types in accordance with different variations of design criteria.

Allowable Subject Matter

5. Claims 26-31 are allowable over the prior art of record.
6. Claims 5-9, 18-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher B. Shin whose telephone number is 571-272-4159. The examiner can normally be reached on 6:30-5:00 M,Tu,Th,F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on 571-272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2181

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CHRISTOHPER SHIN
PIMARY EXAMINER
OF 2181

November 21, 2006
cs

A handwritten signature in black ink, appearing to read 'Chris', with a stylized flourish at the end.